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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/839,486	04/23/2001	Marc J. Beacken	5-4-2-17	2587

7590 03/12/2004

Charles E. Graves Associates, P.C.  
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EXAMINER

TORRES, JOSEPH D

ART UNIT	PAPER NUMBER
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2133

DATE MAILED: 03/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/839,486

Applicant(s)

BEACKEN ET AL.

Examiner

Joseph D. Torres

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-19 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |  |
|--|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                        |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____   |

## DETAILED ACTION

### *Election/Restrictions*

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-8 and 13, drawn to A Process for Transmitting by Defining an x-y Sub-matrix of Cells in SDRAM including a Step for Interleaving Corresponding Segments of Successive Codewords into the Submatrix of Cells, classified in class 714, subclass 701.
- II. Claims 9-12, drawn to A Process of Optical Free-Space Communication Using a Permutation Buffer Comprising Banks of SDRAM Devices Arrayed as a Matrix of Megaword Stores with Physical Row-and-Column Addresses Wherein each said Row Constitutes a Page, classified in class 714, subclass 762.
- III. Claims 14-19, drawn to An Apparatus for Transmitting with an SDRAM Buffer Store having a Defined Repeating x-y Submatrix of Cells and a means for Effecting a WRITE Operation to Interleave corresponding Segments of Successive said Codewords into said Repeating Submatrix of Cells, classified in class 714, subclass 762.

The inventions are distinct, each from the other because of the following reasons:

Inventions Group I, A Process for Transmitting by Defining an x-y Sub-matrix of Cells in SDRAM including a Step for Interleaving Corresponding Segments of Successive Codewords into the Submatrix of Cells, and Group II, A Process of Optical

Free-Space Communication Using a Permutation Buffer Comprising Banks of SDRAM Devices Arrayed as a Matrix of Megaword Stores with Physical Row-and-Column Addresses Wherein each said Row Constitutes a Page, are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention Group I, A Process for Transmitting by Defining an x-y Sub-matrix of Cells in SDRAM including a Step for Interleaving Corresponding Segments of Successive Codewords into the Submatrix of Cells, has separate utility such as in a device whereby an SDRAM buffer is partitioned into an x-y submatrix of said cells representing a set of entries comprising a single SDRAM physical page. In the instant case, invention Group II, A Process of Optical Free-Space Communication Using a Permutation Buffer Comprising Banks of SDRAM Devices Arrayed as a Matrix of Megaword Stores with Physical Row-and-Column Addresses Wherein each said Row Constitutes a Page, has separate utility such as in a device with a step for WRITING interleaved segments into designated addresses of a permutation buffer comprising banks of SDRAM devices arrayed as a matrix of megaword stores with physical row-and-column addresses wherein each said row constitutes a page. See MPEP § 806.05(d).

Inventions distinct, each from the other because of the following reasons:

Inventions Group I, A Process for Transmitting by Defining an x-y Sub-matrix of Cells in SDRAM including a Step for Interleaving Corresponding Segments of Successive Codewords into the Submatrix of Cells, and Group III, An Apparatus for Transmitting with an SDRAM Buffer Store having a Defined Repeating x-y Submatrix of

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Cells and a means for Effecting a WRITE Operation to Interleave corresponding Segments of Successive said Codewords into said Repeating Submatrix of Cells, are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention Group I, A Process for Transmitting by Defining an x-y Sub-matrix of Cells in SDRAM including a Step for Interleaving Corresponding Segments of Successive Codewords into the Submatrix of Cells, has separate utility such as in a device whereby an SDRAM buffer is partitioned into an x-y submatrix of said cells representing a set of entries comprising a single SDRAM physical page with a single submatrix. In the instant case, invention Group III, An Apparatus for Transmitting with an SDRAM Buffer Store having a Defined Repeating x-y Submatrix of Cells and a means for Effecting a WRITE Operation to Interleave corresponding Segments of Successive said Codewords into said Repeating Submatrix of Cells, has separate utility such as in a device whereby an SDRAM buffer store comprises a repeating x-y submatrix of said cells representing the set of entries comprising a single SDRAM physical page and means for effecting a WRITE operation to interleave corresponding segments of successive said codewords into said repeating submatrix of cells. See MPEP § 806.05(d).

Inventions Group II, A Process of Optical Free-Space Communication Using a Permutation Buffer Comprising Banks of SDRAM Devices Arrayed as a Matrix of Megaword Stores with Physical Row-and-Column Addresses Wherein each said Row Constitutes a Page, and Group III, An Apparatus for Transmitting with an SDRAM Buffer

Store having a Defined Repeating x-y Submatrix of Cells and a means for Effecting a WRITE Operation to Interleave corresponding Segments of Successive said Codewords into said Repeating Submatrix of Cells, are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention Group II, A Process of Optical Free-Space Communication Using a Permutation Buffer Comprising Banks of SDRAM Devices Arrayed as a Matrix of Megaword Stores with Physical Row-and-Column Addresses Wherein each said Row Constitutes a Page, has separate utility such as in a device with a step for WRITING interleaved segments into designated addresses of a permutation buffer comprising banks of SDRAM devices arrayed as a matrix of megaword stores with physical row-and-column addresses wherein each said row constitutes a page. In the instant case, invention Group III, An Apparatus for Transmitting with an SDRAM Buffer Store having a Defined Repeating x-y Submatrix of Cells and a means for Effecting a WRITE Operation to Interleave corresponding Segments of Successive said Codewords into said Repeating Submatrix of Cells, has separate utility such as in a device whereby an SDRAM buffer store comprises a repeating x-y submatrix of said cells representing the set of entries comprising a single SDRAM physical page and means for effecting a WRITE operation to interleave corresponding segments of successive said codewords into said repeating submatrix of cells. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II and vice a versa, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group III and vice a versa, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group III and vice a versa, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

A telephone call was made to Charles E. Graves on 03 March 2004 to request an oral election to the above restriction requirement, but did not result in an election being made.

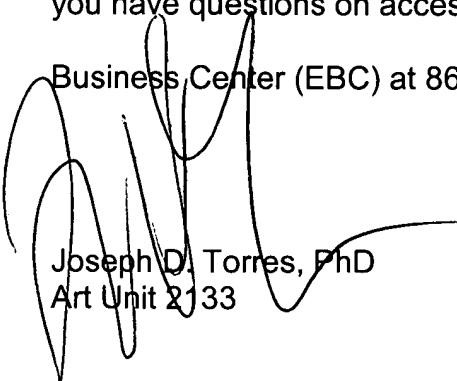
Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D. Torres whose telephone number is (703) 308-7066. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (703) 305-9595. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Joseph D. Torres, PhD  
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